

A Proposal For Restructuring Special Operations Vertical Lift Forces

MCWAR 1993

Subject Area National Military Strategy

A PROPOSAL FOR RESTRUCTURING
SPECIAL OPERATIONS VERTICAL LIFT FORCES

by

Lieutenant Colonel Richard L. Comer
United States Air Force
2 June 1993

Prepared in Partial Fulfillment of
Marine Corps War College
Marine Corps Combat Development Center
Quantico Marine Base, Virginia

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 1993		2. REPORT TYPE		3. DATES COVERED 00-00-1993 to 00-00-1993	
4. TITLE AND SUBTITLE A Proposal For Restructuring Special Operations Vertical Lift Forces				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Marine Corps,Command and Staff College, Marine Corps University,2076 South Street, Marine Corps Combat Development Command,Quantico,VA,22134-5068				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 42	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Executive Summary

Thesis: USSOCOM needs to change its mix of vertical lift aircraft supporting its mission. It should acquire sufficient Army helicopters to accomplish the helicopter mission, acquire the MV-22 to fulfill the long range vertical lift requirement, and, as these aircraft become operational, retire the aging MH-53Js of the Air Force and give them to the Marine Corps. The Marines can then equip their newer H-53 with the avionics, navigational, and electronic warfare equipment from the retired Air Force aircraft. USSOCOM should also assume responsibility for Combat Search and Rescue, assume command of the Air Rescue Service, and become the joint unified command for both special operations and rescue.

Discussion: The attempts over the last few years to get all of the helicopters supporting special operations into a single service seemed to come to pass with the formation of USSOCOM. However, the differences between services, regulations, training, and doctrine have continued. The Marines have supported possible requirements to perform special operations-like missions with its own resources, including its own versions of the H-53. Attempts to transfer the Air Force H-53 to the Army have proven more expensive than the status-quo. Current procurement and modification programs to build advanced avionics Army helicopters and the SOF variant MV-22 will make possible the retirement of the Air Force H-53s. They can be given to the Marine Corps so the Marines can install the advanced navigation, terrain following, self-defense equipment, and night vision gear of these aircraft onto their newer versions of the same aircraft. Additionally, the joint command has also had to perform combat search and rescue (CSAR) during wartime, since it has the best aircraft for the job. Current proposals to create a joint command to oversee CSAR ignore the already existing joint command which already owns many of the aircraft which would be used for this mission. With Army MH-60s and MH-47s, USSOCOM can add Air Force HH-60s, MV-22s, and HC-130 tankers to provide the proper mix of aircraft to perform both of these closely related vertical lift missions.

Summary: A comprehensive approach to building the vertical lift forces assigned to USSOCOM can achieve efficient and joint command and control along with modernization. The Marine Corps can gain from the retirement of the Air Force MH-53s from the special operations command, significantly enhancing the capabilities of the expeditionary units at small relative cost. The timing of the new aircraft becoming operational and the projected retirement of the MH-53 provide us with the opportunity to do some good for the Army, Air Force, and Marines while also providing for career protection and safe transitions of the aircraft.

TABLE OF CONTENTS

A PROPOSAL FOR RESTRUCTURING SPECIAL OPERATIONS VERTICAL LIFT FORCES	1
I. INTRODUCTION	1
II. HISTORICAL PERSPECTIVE	3
A. Diverse Helicopters; Assorted Origins	3
B. Initial Special Operations Evolution	5
III. USSOCOM: MODERN, JOINT ORGANIZATION	11
IV. CURRENT PROPOSALS TO CHANGE USSOCOM ORGANIZATIONAL STRUCTURE	13
A. Roles, Missions, and Service Affiliations	13
B. The Joint Special Operations Air Component Commander	16
C. Should USSOCOM Command and Perform Combat Search and Rescue?	18
V. USSOCOM'S VERTICAL LIFT PLANS TAKE SHAPE	22
A. Building Helicopters	22
B. The MV-22 Osprey	26
VI. A COMPREHENSIVE APPROACH TO USSOCOM'S ORGANIZATION AND VERTICAL LIFT OPTIONS	31

A PROPOSAL FOR RESTRUCTURING SPECIAL OPERATIONS VERTICAL LIFT FORCES

I. INTRODUCTION

The force structure of airlift which supports special operations forces for the United States represents a hodge-podge of aircraft from the different services. The procurement of these aircraft hasn't produced the best and most efficient mix and numbers of aircraft to support special operations' needs. Each service which currently provides helicopters for special operations missions procured its machines using its own doctrine and procedures, and many of the aircraft were originally bought for other missions and converted to special operations use later. The result today is a mix of aircraft in the Army, Air Force, and Marine Corps which are continually modified to allow them to fulfill the evolving requirements of their missions. As we build modern aircraft and prepare for the possible missions of special operations forces in the future, we have the opportunity to restructure our force and service mix of aircraft for better efficiency and orderly divisions of mission areas between services.

The Defense Reorganization Act of 1986, with the Cohen-Nunn Amendment, created US Special Operations Command, a functional, unified command with the responsibility of replacing the past chaos with order. The new command has the opportunity to replace parochial motivations with a true joint vision, allowing for an orderly transition into new machinery while also giving the people who perform the mission greater stability in their lives,

mission areas, and service affiliations. USSOCOM is also in a position to provide some additional capability to the Marine Corps and its developing special operations capabilities.

Aircraft procurement and modifications expected or planned during the next ten years will provide the V-22 to fill a gap in current capability and will build enough properly equipped helicopters in the MH-47E and MH-60K for the Army to support the helilift needs of USSOCOM forces. The Marine Corps will eventually, not later than 2010, become the only service operating the H-53 in any of its variants, and with smart programming and vision, it could gain possession of the special equipment now installed on the Air Force models of that aircraft. Additionally, anticipatory personnel action can ensure each of the three services assign and train people in advance to man their new aircraft, effecting smooth transitions into the new aircraft, modified equipment, and added capabilities.

The proposals presented here are comprehensive, addressing several interlocking problems and some issues which haven't heretofore been considered as related. The attempt to include numerous aircraft, missions, jointness, and the separation of the services makes the proposals original and the solutions inter-related. To understand it all you'll have to have at least a rudimentary understanding of the history of current force structure and joint arrangements.

II. HISTORICAL PERSPECTIVE

A. Diverse Helicopters: Assorted Origins

Each of the uniformed services developed helicopters from its own conventional perspective using its own doctrine. None of these machines was originally designed for the special operations mission with long-range (greater than 300 nautical mile radius) flight profiles including penetrations of enemy defenses. The Army and Marine Corps built helicopters to provide ground units a means for troop movement, to facilitate maneuver in the immediate battlefield area. The Army saw helicopters as a way to overcome obstacles to troop movement in the jungles of Southeast Asia, building medium and large helicopters in the forms of the H-1, UH-60, and CH-47 to fulfill their needs to move weapons and troops.¹ The Marine Corps built a similar mix of sizes, but designed CH-46 and CH-53 helicopters for shipboard operations to satisfy their needs for ship-to-shore troop and artillery movements. Both of these services concentrated on providing aircraft which could carry specific loads over relatively short distances. Early in this process of helicopter evolution, neither worked on providing their aircraft with capabilities to penetrate enemy air defenses or the range to go deep behind enemy lines.

The Air Force built its helicopters for different missions and flight profiles. Its helicopters had to transit enemy air defenses in order to attempt rescues of aircrews shot down far

¹J. D. Coleman, Pleiku: The Dawn of Helicopter Warfare in Vietnam, St. Martin's Press, New York, NY 1989, Chapters 1,2,9.

behind enemy lines. Historian John Guilmartin recounts the transition of Air Force aircraft from the H-43 through the CH-3 and finally to the HH-53C, this final one an air refuelable version of the Marine Corps CH-53A.² Air Force doctrine called for making its fighter aircraft capable of deep penetration to perform its air interdiction mission, and the helicopter which might be called on to rescue those crews had to be similarly equipped. This requirement resulted in installation on Air Force helicopters of radar warning receivers, doppler navigation systems, flares for heat seeking missile decoys, and aluminum chaff to confuse enemy radar guided weaponry.³

With these helicopters, the services exited the Vietnam era and confronted the later stages of the Cold War. Tactical thinking centered on the European scenario and large force movements. The Army began using its CH-47 Chinooks to move artillery pieces, while Marines used CH-53s to move troops and heavy equipment ashore, and the Air Force began developing limited night capability with its HH-53Hs which were intended for single-ship rescue attempts in medium to high threat environments. Although the H-53 originally was designed to haul Marines and equipment, the HH-53H modifications made the airframe 1500 pounds heavier, and the later modifications to MH-53J configura-

²John G. Guilmartin, "Rescue: Yesterday, Today, and Tomorrow," The MAC Flyer, vol. xxii, no. 9, Sept. 1975, p. 4.

³Earl H. Tilford Jr., Search and Rescue in Southeast Asia. 1961-1975, Washington, D.C., Office of Air Force History, pp. 90-4.

tion made them heavier still, reducing possible mission payloads. Future special operations requirements weren't foreseen in these machines.

B. Initial Special Operations Evolution

The modern development of international terrorism and the failed attempt by the United States military to rescue hostages in Iran in 1980 caused America to examine its military and to begin rebuilding special operations capabilities. The Holloway Commission Report to Congress on the attempted rescue of the hostages in Iran recommended the formation of a standing Joint Task Force (JTF) which could react quickly to future crises of this nature.⁴

Recriminations about the failure were easy to come by; most centered on the performance of the helicopters used and the crews who flew them. James Kyle, the Air Force commander of Desert One, includes a chapter arguing that Air Force helicopter pilots should have been used because of Air Force emphasis on long-range navigation over land.⁵ However, the Holloway Commission considered such a criticism but discounted it, saying that none of the services were training crews for such a mission;⁶ that was the problem. The commission's assessment centered on unit cohesion:

⁴Admiral J.L. Holloway, et.al., "Holloway Commission Report: Special Operations Review Group Rescue Mission Report," Washington D.C., August 1990, pp. vi, 37.

⁵James H. Kyle, Col., Ret., The Guts To Try. Orion Books, New York, 1990, pp.119-123.

⁶Holloway, p. 23.

It is believed the preservation of an established squadron's inherent unit cohesion could have facilitated training, enhanced information flow, and increased aircrew knowledge, all of which could lead to a more integrated unit operation. ...[Such a change] would have enhanced training and more likely increased the chance of success.⁷

And it didn't suddenly get better. The services, while making some progress, became mired in parochialism. Historian Richard Davis notes that the Army and Air Force were developing similar tactics and equipment during the early 1980's, both expecting to perform very similar missions for the same special forces units. The first attempt at ending the competition was an agreement on long and short range missions, allowing the Army to fly missions of less than 300 miles and the Air Force to fly those of greater than that distance. This agreement allowed each service to use what it had, Air Force air-refuelable helicopters went long while non air-refuelable helicopters went short distances, but the majority of units they supported wanted to work with one air support structure. The differences in regulations, in aircraft, in crew training doctrine, and in color of uniform between the two services caused confusion and some degree of rivalry.

The Air Force and Army tried to solve the problem at the

⁷Holloway, p. 37.

⁸Richard G. Davis, The 31 Initiatives: a Study in Air Force-Army Cooperation. Office of Air Force History, Washington, D.C., 1987, p. 75. Col. Gary L. Weikel, an Air Staff Planner in 1983, informed me the 300 mile division was a convention agreed on by the services as they formulated the SOF Master Plan, to determine the number of helicopters the Army and Air Force would contribute to SOF, personal interview, February 1993.

institutional level with a controversial agreement entitled "Initiative 17". As one of 31 initiatives, the Army and the Air Force Chiefs of Staff believed they were making progress toward inter-service cooperation and toward following the advice of the Holloway Commission. This initiative in 1984 agreed that the Army would perform the entire special operations helicopter mission, transferring the 9 Air Force HH-53H PaveLow helicopters to the Army. The Air Force, under separate agreement in Initiative 16, would keep the combat search and rescue, CSAR, mission.⁹

This was the first time anyone proposed transfer of helicopters and crews from the Air Force to the Army. Davis reports that Congress, distrustful of service commitment to upgrade special operations capability and spurred on by a group referred to as the "SOF Mafia", intervened and directed the two services to continue to operate along the lines of the 300 nautical mile division of labor. By 1987, the services decided to await the formation of the newly formed United States Special Operations Command or USSOCOM. Davis explains:

"Given this atmosphere of confusion, skepticism, and special interest, the Air Force, although in favor of implementing the initiative, delayed, if not indefinitely postponed, action."¹⁰

That congress didn't agree on the transfer of equipment and people shows the lack of trust in the intentions and maturity of the services on the part of civilians overseeing the effort.

⁹Davis, The 31 Initiatives. p.56.

¹⁰Davis, The 31 Initiatives. p.75.

Congress created USSOCOM in 1987. The separation of responsibility for special operations from the services gave the new command a separate budget so it could fulfill these responsibilities to organize, train, and equip special operations forces.¹¹ Still, the division of labor between Air Force and Army helicopters remained somewhat artificial and the helicopters and their crews mixed together for many missions which required larger numbers of helicopters than either service had available for the tasks. Air Force helicopters often participated in short range mission exercises and Army helicopters went long distances using Forward Arming and Refueling Point's (FAARPs). At times, even the Air Force aircraft refueled on the ground to enhance formation integrity during exercises or mission rehearsals.

The blurring of mission responsibility remained a problem when the differing regulations of the two services caused confusion. The two helicopter forces engaged in sometimes open competition for the same missions, often training with the same special forces units for the same missions but on different exercises.

By agreement with USSOCOM, the Marines developed capabilities to execute missions using special operations similar tactics without being seen as in competition with the joint command. Being thus freed from serving outside command, the Marines were likewise free to develop capabilities in these tactics more

¹¹"Special Operations Command: Progress in Implementing Legislative Mandates," General Accounting Office, Washington D.C., 1990, p. 1.

slowly. Defense Helicopter Magazine details the development of the Marine Expeditionary Unit (Special Operations Capable) or MEU(SOC) wherein an integrated force of Marine infantry, Force Reconnaissance, and Air Combat Elements (ACE) gained expertise in tactics to combat terrorists and unconventional warfare threats.¹² The helicopter component of the MEU(SOC) looked somewhat like the composite group of aircraft that USSOCOM was flying in its exercises. The ACE contains a composite squadron usually consisting of 12 CH-46, 4 CH-53E, 4 AH-1W, and 4 UH-1N aircraft. Squadron training emphasizes night vision goggle operations integrating troop and artillery movements with gunships to provide covering fire when necessary.¹³ While the Marines tried to mirror the tactics of the special operators, they did not claim then and do not today claim to equal the capabilities of USSOCOM, stressing that the MEU(SOC) force trains for SOP missions only in advance of deployment and does not continue its intensive and integrated training after completing its cruise.¹⁴

Marine development of the V-22 and continued procurement of the E-model H-53s represent significant upgrades of the current MEU(SOC) capability. The three engine H-53s can lift payloads of up to 25,000 pounds greater than the two engine models, are typically air refuelable, and will support numerous mission

¹²Rick Mullen, "Special Ops From the Sea," Defense Helicopter, vol. xii, no. 2, April-May 1993, pp. 7-8.

¹³Mullen, pp. 8-9.

¹⁴Lt. Col. Joseph Brytus, personal interview, Feb. 15, 1993.

profiles. The Marine Corps is not buying sophisticated avionics, communications, or aircraft survival equipment similar to that installed on Air Force or programmed for Army SOP aircraft. This decision has held down the cost and a forecast of Defense Market Intelligence Service predicts the Marines will buy enough of these new helicopters to replace all of its two engine D-models. The report further predicts that this aircraft could be the cheaper replacement of the V-22 should Marine Medium Lift Requirements be re-written to fit a helicopter instead of requiring the flight profile of the V-22.¹⁵

The doctrinal differences of the services made the Army and Marines more oriented to serving ground commanders--something essential in special operations, while Air Force helicopters and their crews benefitted from Air Force technology and training, developing the crews and equipment to operate and survive during long-range missions in hostile territory--an equally important contribution. The Army and Marines had machines ready to carry the required load and the Air Force had machines capable of going to the required places. Neither service has built aircraft which could do it all. At least until USSOCOM can completely organize itself and take charge of future aircraft procurement actions, the hodge-podge of aircraft and services will have to continue making the best of combining their capabilities.

¹⁵DMS Market Intelligence Retort: Forecast International, "Sikorski Helicopters, CH-MH-53," September, 1992, p. 5.

III. USSOCOM: MODERN, JOINT ORGANIZATION

United States Special Operations Command inherited several organization and force modernization efforts and has been involved in making judgements of them over the past six years. With the mandate to "organize, train, and equip," the equivalent of service responsibilities for all SOF, the newly formed command began in 1987 to take charge. The "1990 Report to the Senate Armed Services Committee" by the General Accounting Office noted the obstacles at the command's inception:

[The] United States lacked joint military institutions capable of effectively integrating the forces of different services in combined (i.e. joint) operations. Organizational shortfalls that were cited related to (1) service parochialism in operational matters and (2) poorly developed joint doctrine.¹⁶

The command made progress toward organizing for its mission despite needing two years to place a majority of people on its staff who had actual experience in its mission.

The Army was quick to designate a subordinate US Army Special Operations Command, and the Navy quickly followed suit in 1987.¹⁷ The Air Force didn't act so quickly to relinquish command of its aircraft dedicated to special operations. Col. William G. Boykin points out that Congress mandated the formation of USSOCOM as an amendment to the Goldwater-Nichols Department of Defense Re-Organization Act of 1986 at least partly in reaction to Operation URGENT FURY at Grenada in 1983. The problem--there

¹⁶"Special Operations Command," GAO, p. 11.

¹⁷"Special Operations Command," GAO, p.19.

were less aircraft available for SOF in 1983 than in 1980.¹⁸

Col. James Roberts who worked in the Air Staff's Special Operations Office during that time states that funds were continually diverted from SOP aircraft programs to conventional airlifters, like the C-17, by Military Airlift Command leaving SOF aircraft as the top unfunded programs in that command.¹⁹

Still, it took a while for USSOCOM to get its components under its official command. Not until 1990 did Air Force Chief of Staff, Larry Welch, admit the command relationship of Air Force Special Operations Command (AFSOC), still under the Military Airlift Command, was "somewhat awkward" and AFSOC should be a component of the joint command. So, in May 1990, AFSOC went under the sole command of USSOCOM.²⁰ Although the Air Force took longer and seemed more reluctant to establish its component of USSOCOM, it seemed this action represented the final realization of Initiative 17, all parts of the US military's special operations forces were now under one unified command. Clearly, now special operations people have power to direct and regulate forces, and they control the military position over whatever procurement money is available toward buying necessary aircraft.

¹⁸Col. William G. Boykin, "Special Operations and Low-Intensity Conflict Legislation: Why It Passed and Have the Voids Been Filled?" US Army War College, Carlisle Barracks, Pa., 12 April 1991, p.17.

¹⁹Major John A. Hill, "AFSOP: A Unique Application of Aerospace Power, Air University Press, Maxwell AFB Al., April 1993, p. 3.

²⁰Hill, p. 3.

IV. CURRENT PROPOSALS TO CHANGE USSOCOM ORGANIZATIONAL STRUCTURE

A. Roles, Missions, and Service Affiliations

United States Special Operations Command doesn't suffer from a lack of good advice from many and varied sources. Near simultaneous proposals appeared last summer, one from Senator Sam Nunn and one from Air War College on changing the structure of air support for USSOCOM. They conflict with one another, but both received consideration. Their contrast and their resolution can illustrate how the young command could arrange its forces and chain of command in the future.

Senator Sam Nunn's speech on "Roles and Missions of the Armed Forces" of July 1992 suggested the Army and the Air Force could consolidate their helicopters in the Army and achieve some cost savings and mission efficiencies. This call to review the force structure and service affiliations resurrected Initiative 17 from the dead.

The Chairman of the Joint Chiefs of Staff, General Colin Powell, conducted with the Joint Staff an investigation into the roles each service plays in force structure. Required by the Goldwater-Nichols legislation, his report took shape during the fall of 1992, and in the early drafts of the report conceded the point to Senator Nunn that helicopters in the Air Force would transfer to the Army. The Chairman's draft report said it would direct the 66 special operations helicopters of the Air Force to

transfer to the Army by fiscal year 1995. The report asserted that the change "will result in significant cost savings and a more effective and efficient special operations force."²¹ The draft was sent to affected commands for comment, verification, and recommendations. Sent out on December 18th, responses to the draft had to be quick--required by the 7th of January.²²

Officers at USSOCOM engaged in a flurry of activity to attempt to verify or refute the "significant cost savings" and "more effective and efficient" expectations of the proposed changes in the Chairman's report. The response, signed by General Stiner on the 5th of January, took issue with the idea that all helicopters supporting SOP had to be in the same service in order to be most efficient. Indeed, the purpose of the joint command was to achieve efficiencies by having the services work together. Stiner's letter states:

The proposal to transfer these [Air Force] helicopters is a revisitation of Initiative 17, an idea that was overtaken by the Cohen-Nunn legislation. The establishment of USSOCOM consolidated all special operations helicopters under one command, and that combatant commander (USCINCSOC) should be permitted to organized his force according to the exigencies of COCOM.²³

The second part of Stiner's argument against the change

²¹General Colin L. Powell, "Chairman of the Joint Chiefs of Staff Report on the Roles, Missions, and Functions of the Armed Forces of the United States" DRAFT ONLY, Washington, D.C., December 1992, pp. III-18-III-19.

²²Gen. Cohn L. Powell, Letter accompanying Report on Roles, Missions, and Functions, 18 Dec 92.

²³General Carl W. Stiner, Letter on CJCS Roles and Missions Report, 5 Jan 93, p. 2.

disputes the cost savings assumed in the Chairman's draft and is contained in TAB A of his response. It points out that the MH-53J doesn't [in fact, no variant of the H-53] exist in the Army. To transfer these aircraft from an Air Force base to an Army airfield would cost, not save, money. The logistics structure to support the H-53 airframe exists in the AF, not in the Army. The personnel who fly the machines would also have to move and change service affiliations. Without Arty branch identification or training, people's careers would suffer and some of the MH-53J crewmembers would end up out of the military; hence, operational capability would also suffer as the aircraft serve little purpose without trained aircrews.²⁴ Even if the aircraft remain at their AF bases and change over to the Army, no dollar savings could be realized. The only result would be that the people would have to buy new uniforms and change their reporting headquarters, if they all stayed in their new service. The Joint Staff and the Chairman either agreed or acquiesced to the reasoning as the entire section on "Special Operations Helicopters" was excised from the report in the final version published in February.²⁵ Initiative 17 is back in its tomb--at least temporarily.

²⁴Stiner, Letter, TAB A, pp. 1-4.

²⁵General Cohn L. Powell, "Chairman of the Joint Chiefs of Staff Report on the Roles, Missions, and Functions of the Armed Forces of the United States," Washington, D.C., February 1993, p. 24.

B. The Joint Special Operations
Air Component Commander

A contrasting proposal came from the Air War College, also during the summer of 1992. It suggested that the air component of USSOCOM take command of all air assets--essentially, the Joint Force Air Component Commander concept applied to command and control of all special operations aircraft.²⁶ The idea gained a following since it applied joint doctrine to the command as though it were a war fighting command engaged in war fighting, a popular concept at USSOCOM. Many in USSOCOM saw this proposal as the reverse of Initiative 17; it would put all the Army helicopters under command of the APSOC as the Joint Special Operations Air Component Commander or JSOACC.

USSOCOM had no enthusiasm for this proposal, and it surfaced only in an internal Air Force newsletter, Inside the Air Force. Major General Eggers, the Deputy CINC of USSOCOM, explained the proposal "is not under active consideration."²⁷ But the newsletter indicates that some of the original organizational problems, pre-USSOCOM, still exist:

Confusion arises in part because special operations 'customers' must turn to the Air Force for some aviation assets, while for others they must look to the Army, one special operations source said. 'The way we do it now, you

²⁶Hill, pp. 45-46.

²⁷Ben Iannotta, "Top Special Ops Officials Bury Internal Proposal for New 'Aviation Command,'" Inside the Air Force. Vol. 4, No. 5, February 5, 1993, p. 16.

figure out whether you need Army or Air Force planes and then hope you call the right headquarters.'²⁸

Action on the proposal would make a joint headquarters of AFSOC and include some Army officers in its staff as a single clearing-house for air support of SOF missions. To place all air tasking under this single manager would put USSOCOM on a continuous wartime footing and command structure in regard to its air assets. "Airmen are responsible for the effective employment of aerospace power,"²⁹ says Air Force Doctrine and the proposal attempts to re-order USSOCOM with that thought. Army helicopters, although remaining in the Army, would receive their operational orders from what is now APSOC, and; conversely, a so? unit of shooters would receive its air support from AFSOC. Army officers' reactions to the suggestion are uniform:

. . .officials at Ft. Bragg do not like the idea of dismantling their aviation command, sources said.

'A ground commander wants control over his own assets,' the source said. 'I don't think it would be a very popular idea to take [helicopter) assets away and give them to what they perceive would be an Air Force Command;³⁰

The dueling proposals will last as long as service priorities remain paramount in the thinking of some in the unified command. The JSOACC concept accepts the combatant command role of USSOCOM, one that does exist in the Cohen-Nunn legislation but one which has little chance of use in the future. More important

²⁸Iannotta, p. 16.

²⁹Air Force Manual 1-1: Basic Aerospace Doctrine of the United States Air Force, Department of the Air Force, Washington, D.C., March 1992, para. 3-1, p. 9.

³⁰Iannotta, p. 16.

is the issue of mission capability. The JSOACC proposal falls because it adds nothing to current capability. Major General Eggers said as much. "We already have control of Army and Air Force assets under one command," he said, referring to USSOCOM.³¹

C. Should USSOCOM Command and Perform Combat Search and Rescue?

Another idea came to light in the draft of the Chairman's Roles, Missions, and Functions review process when the draft indicated all Air Force helicopters of the Air Rescue Service would also transfer to the Army at an unspecified time in the future. Reasons cited were the problems inherent in the current system of each service being responsible for its own CSAR which has resulted in dissimilar procedures, training, and equipment. Although the Joint Force Commander in any contingency will need responsive forces linked by good communications, the current system is disjointed and all service capabilities should be consolidated under a Joint Rescue Center which will also control SOCOM assets when necessary.³² The draft report seems tentative here, referencing a Joint Rescue Center which none of the theater CINCs have in their commands, and to the transfer of helicopters between services without saying when it will happen. The final report dropped the idea. This one will also undoubtedly come up again. A reasonable question comes up: If SOCOM assets are

³¹Iannotta, p. 16.

³²Powell, Unpublished Draft, p. III-16-17.

sometimes to be contributed to the effort, why should another joint, unified command be necessary?

The experiences of Operation DESERT STORM come into play here. CSAR became a task for SOCOM forces during the Gulf War. Of the three combat rescues which took place during the war, two were performed inside Iraqi territory prior to the advent of the ground campaign. Both of these successful rescues, and all other attempts which penetrated Iraqi airspace prior to ground forces moving into Iraq, were performed by SOCOM helicopters under the command of Special Operations Command--Central (SOCCENT).³³

A proposed solution appeared in General Stiner's response to the Chairman's draft report. He pointed out that only USSOCOM helicopters had the penetration and survival capabilities to handle the most dangerous CSAR tasks. In offering to assume command of this mission in the joint arena, he asked for transfer of the Air Force's Air Rescue Service assets of HH-60s and HC-130s to USSOCOM to consolidate all assets under a joint command and avoid inter-service transfers of people. The extra aircraft and crews will make it possible for SOCOM to provide CSAR as a normal part of its mission without detrimental over-tasking of other SOF assets.³⁴ Stiner's proposal receives support from John Collins in his independent report to Congress on armed forces roles and functions. He asserts that USSOCOM can assume respon-

³³Benjamin F. Schemmer, "No USAF Combat Rescue Aircraft in Gulf: It Took 72 Hours to Launch one Rescue," Armed Forces Journal. July 1991, pp.37-38.

³⁴Stiner, Letter to Gen. Powell, p. 2, para. 6.

sibility for the CSAR mission, but that SOCOM must receive augmentation by more aircraft.³⁵ If this proposal were adopted, eighty-five HH-60Gs and forty HC-130 tankers from the AF's Air Rescue Service could be assigned to SOCOM.

This proposal makes sense, consolidating similar assets with similar missions while also providing an existing organization. Each theater CINC has his own special operations component; hence, command and control structure already exists and a new Joint Rescue Center, an added complication, wouldn't be necessary. Headquarters Air Force, as the only service which has built a separate command for CSAR, will oppose the idea. The perception that the Air Combat Command might lose its ability to base ARS helicopters with its fighter wings for peacetime rescue coverage, and that it will desire to maintain its responsibility to rescue its own people in combat will be the chief problems. This worry is another view of the trust issue among the services and puts the Air Force on the defensive in the same way Army commanders react to their helicopters being under a JSOACC. But it's less persuasive here because CSAR forces must also rescue Navy, Marine, and SOF crews, all of whom may be engaged in deep strike missions.

The better argument rests with putting OSAR under USSOCOM. Special operations forces do a large portion of the mission now,

³⁵John N. Collins, CRS Retort for Congress: Roles and Functions of U.S. Combat Forces.: past. Present. and Prospects. Congressional Research Service, Washington D.C., January 21, 1993) pp.55-57.

and, with the procurement of the V-22 as described in the next section, SOF will continue to be the best equipped to do the most difficult CSAR missions. In future conflicts, the component commander with the best chance to get the job done right will be a theater SOC in command of SOCOM aircraft. A single commander will then be able to apportion the best aircraft for each job he might need to accomplish.

V. USSOCOM'S VERTICAL LIFT PLANS TAKE SHAPE

A. Building Helicopters

The new command inherited several procurement programs, some in progress, some still proposals. Procurement of new machines was proceeding in both the Air Force and in the Army. Both services were building versions of the H-60 for special operations missions, the primary difference being a refueling probe for the Air Force model. The Air Force began in 1985 its upgrade of the HH-53H to the MH-53J simultaneously expanding its operational fleet from 9 to 41 aircraft equipped with advanced navigation, night vision, and terrain-following radar; all of it computerized and fully integrated.³⁶ But the youngest tail number of the 41 MH-53s in the Air Force was built in 1973, twenty years ago. The aircraft are programmed to continue as USSOCOM assets through the year 2005.³⁷ The production of other helicopters which could replace these MH-53Js shows they will probably have to last that long.

The Army, following through with its understanding of Initiative 17 and following agreements, began in 1987 to outfit its CH-47s with refueling probes and made plans to modify up to 51 aircraft with advanced navigation, night vision equipment, and

³⁶Special Forces and Missions. Time-Life Books, Alexandria, Va., 1990, pp. 164-171.

³⁷USSOCOM/J-5, Directorate of Plans, chart showing projected service life of SOP aircraft, dated April 1993, obtained by FAX.

an even newer version of terrain-following radar.³⁸ At that time a shortfall of vertical lift aircraft remained to be solved,³⁹ and the natural question about duplicate aircraft in different services didn't come up. Since all 41 H-53s in the Air Force would now be devoted to SOF there are no more to modify; all future procurement of large helicopters will probably be Army aircraft. Armed Forces Journal states that when first contracted, the date for delivery of the last of the 51 14H-47Es was to be December of 1994.⁴⁰

The problems associated with procurement, flight tests, and crew training of the new aircraft will cause some delay in the dates when the two aircraft will be fully mission ready. The first indication of problems came soon after USSOCOM assumed responsibility for the programs from the Army. A General Accounting Office report, at the request of the Senate Armed Services Committee, detailed the complexity of the programs and warned of problems endemic in the procurement process used to build the two aircraft. The report calls the program a "high risk acquisition strategy," pointing out that many expected additions to the aircraft are not funded in the program. It states:

³⁸"Special Operations Forces: Army Plans Highly Concurrent Acquisition Strategy for Costly Helicopters: Report to the Honorable William V. Roth, Jr., U.S. Senate," General Accounting Office, Washington, D.C., September 1990 pp. 12-13.

³⁹Benjamin F. Schemmer, "Four New SOF Aircraft Are Late and Way Over Cost, but. . . ," Armed Forces Journal, July, 1991, p. 42.

⁴⁰Schemmer, p. 44.

The Army's current acquisition strategy for SOP helicopters increases the risk of having to make expensive retrofits on production helicopters to correct deficiencies identified in testing rather than limiting the risk to only those systems produced in a low-rate initial production run. Further, the Army plans to field these systems without an important self-defense capability required for certain missions.⁴¹

The report drew no official response for two years, partly because the responsibility for the program was changing hands from Army to USSOCOM, and partly because its publication coincided with Operation DESERT SHIELD.

The eventual response, signed by the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict, James Locher, admits that some of the costs were not included in the original estimate, but disputes the GAO assertion that system costs of the original aircraft should be included in a modification program. The aircraft buy has been scaled back from 51 MH-47s to 26, about half as many Chinooks as originally proposed, while still buying 23 MH-60Ks. All 49 aircraft will be in production prior to the expected completion dates of required flight testing, but contractual assurances will keep the program on time and close to the newly estimated cost.⁴² The Army acquisition strategy was as flawed as David Stockman's magic asterisks, and USSOCOM has had to engineer a way to pay the bill.

Just as the Assistant Secretary of Defense understands there are more costs involved before these aircraft are finished and

⁴¹"Army . . . Costly Helicopters," GAO, p. 1.

⁴²James R. Locher, III, Letter to Richard Davis, Director of Army Issues, Enclosure: Department of Defense Comments, August 20, 1992, pp. 1,3,6.

flying with fully trained crews, it's easy to see that more time than programmed will also be needed. Software "glitches" have hampered and slowed tests of the IBM-built Integrated Avionics Subsystem (IAS) says a recent Armed Forces Journal article. Both the MH-47E and the MH-60K will use the IAS which had 1000 software trouble reports, or things which have to be fixed with re-programmed, as of January 1992. The most difficult 325 problems remain open as of March of 1993, but the Army officer in charge of the program assured the Journal all open items will be closed by August and operational aircraft will be delivered by December 1993.⁴³ What the article doesn't say is that the terrain-following radar, to be installed on both helicopters, isn't yet fully developed, tested, or ready for integration in the system. Additionally, the Aircraft Survival Equipment (ASE) isn't yet fully funded or ready to install and test on the prototype aircraft.⁴⁴ Confirmation of this last information comes from the 160th Special Operations Aviation Regiment, specifically Lt. Col. Dell Daley, Commander of the 1st Battalion. He said crew training is scheduled to begin at the end of April 1994 and will last 13-15 months. At the end of that time the crews will not yet be qualified in air-refueling and the terrain-following radar won't be ready until sometime after the beginning of 1995, if all of

⁴³James C. Hyde, "Army Still Wrestling with Software Glitches in Special Ops Helo Programs," Armed Forces Journal, April 1993, p. 40.

⁴⁴Lt. Col. David Pyshora, USSOCOM Office of Acquisitions, telephone interview, May 18, 1993.

the testing and software integration goes through without problems or delay. It will take some time for all the crews to get their training in terrain-following flying, but he believes the aircraft will be complete and manned by trained crews sometime in calendar year 1997.⁴⁵ Since the 160th SOAR will conduct the training using its operational crews and will fulfill training and exercise commitments concurrent to the training, unforeseen delays are reasonable. Lt. Col. Pyshora of the USSOCOM Office of Acquisitions estimates that completed aircraft and fully trained crews will come together for the new Army helicopters sometime in 1998 or 1999.⁴⁶ The Air Force MH-53Js will have to last at least that long.

B. The MV-22 Osprey

As Special Operations Command has proceeded with helicopter acquisition, it has also pursued former Air Force procurement programs of new fixed-wing aircraft, including the V-22. If built, this airplane, which takes-off and lands like a helicopter, will have range and survivability similar to other Air Force aircraft intended to execute deep strike missions. It's most similar in flight profile to the MC-130H, Combat Talon, a special operations plane intended to infiltrate troops by air drop techniques. After USSOCOM took over SOF concerns, it accepted the concept of the SOF variant MV-22 as one of its issues.

⁴⁵Lt. Col. Dell Daley, Commander, 1st Battalion, 160th SOAR, telephone interview, 21 May 1993.

⁴⁶Pyshora interview, 18 May 1993.

General Stiner, the recently retired US CINCSOC, stressed the niche of mission requirements the SOF variant MV-22 would fill. Whereas the MC-130 could infiltrate SOF teams, the shortfall is in the need to exfiltrate them, especially if in an emergency situation such as when a team is compromised or fleeing enemy pursuit. He told the Senate Armed Services Committee, "I have a lot of ways to infiltrate at long range, my problem is exfiltration. I am at the limits of helicopters and I need something. . .like a CV-22."⁴⁷ However, he notes that the money to build such a machine as the MV-22 is nowhere programmed in the USSOCOM budget, and to acquire such an aircraft special operations will have to depend on one of the services--as in the joint effort now on-going with the Marines.⁴⁸

It is indeed true that the inability to exfiltrate SOF teams has an effect on the mission and operational decision making. Chief Warrant Officer Vernon Ward, the Army's special forces liaison to Air Force Special Operations Command--Central (APSOCENT) during the Gulf War, explained the results of this deficiency. He explained why no teams who saw combat employment during Operation DESERT STORM chose to go in using fixed-wing aircraft. For such an infiltration, he said, there was "no in-extremis exfil capability." Unless we could assure the headquar-

⁴⁷Transcript, Testimony to SASC by Gen. Carl W. Stiner, March 5, 1992. Copy provided by USMC V-22 Acquisition Office.

⁴⁸Carl W. Stiner, Letter to the Honorable Robert K Dornan, March 25, 1993. Copy provided by the USMC V-22 Acquisition Office.

ters that we could react immediately to a compromised infiltration, the mission could never win approval.⁴⁹

The current commander of Central Command, General Joseph Hoar, told the Senate Armed Services Committee the V-22 as an aircraft which will fill needs in mobility, SOF, and CSAR:

Let me speak to the V-22 then in the abstract as an aircraft that does a lot of things. I think the first thing is the payload, the speed, the self-deployability, which again is an enormous advantage . . . the special operations capability. For deep penetration and, just as important, extraction, for those gallant young men that go deep behind enemy lines, an aircraft of the V-22 type is most important. . . . Additionally, for combat search and rescue, there is no aircraft capable in the inventory right now that could meet that requirement. And I must tell you that I can't go into great details, but there are -- I wish that today we had a more capable combat search and rescue aircraft that could be used in the event of a crisis.⁵⁰

Obviously a prepared statement for a set-up of a question, but it tells the truth about the needs of the combat forces.

Two CINCs and one SF foot soldier should be enough to convince anyone. In fact, large bodies of analytical evidence supporting the need for the MV-22 is available. Commander Dean Sedivy provides the most comprehensive study of these arguments in his monograph written for the Industrial College of the Armed Services. His research, entitled "Bureaucracies at War: The V-22 Osprey Program," restates most of the arguments in favor of the Marine Corps' need for the aircraft as a replacement for its

⁴⁹CW3 Vernon Ward, personal interview, June 1991.

⁵⁰Testimony before SASC, Gen. Joseph Hoar, March 11, 1992, Federal News Service Reprints, Washington, D.C., 1992, Copy provided by USMC V-22 Acquisition Office.

medium-lift helicopters. He presents the story of how and why debate about the machine continued even after then Secretary of Defense Dick Cheney ordered the program cancelled due to his judgement that it costs too much.⁵¹

Although many people find arguments for building the aircraft for the Marines or for SOF persuasive, it was Cheney himself who expressed an argument in favor of the aircraft for special operations uses. When briefed on SOF helicopters in the Gulf War, he asked what could be done to make helicopters faster and increase their range. After hearing that the air-refuelable helicopter is now limited only by crew endurance and goes as fast as a helicopter can go, he was told that the only known answer to needs for more range with vertical lift capability was the new MV-22. Cheney then said he agreed the Osprey was needed for SOF, but he felt the Marines didn't need it and he couldn't justify building only 60 airplanes.⁵²

The program remains an open issue for the new administration, the Marine Corps, and USSOCOM to make a decision. Since the new Secretary of Defense, Mr. Aspin, strongly supported the aircraft as a Congressman,⁵³ and President Clinton voiced support

⁵¹Cmdr. Dean G. Sedivy, "Bureaucracies at War: The V-22 Osprey Program" National Defense University, Washington D.C., 1992, pp. 11-15, 23-33.

⁵²Dick Cheney, at a briefing conducted in the cabin of an MH-53 at Ft. Bragg, North Carolina, July 2, 1990. I was the briefer.

⁵³Sedivy, pp. 31-35.

for the aircraft during the fall campaign.⁵⁴ The new aircraft and its new technology is needed to complete the mix of aircraft in special operations. Without it or an aircraft very much like it, we will someday have to send soldiers into a battle without a realistic way of getting them back out. With it, we can do the whole job.

⁵⁴Steven Kosiak, Analysis of the Fiscal Year 1994 Defense Budget Request, Washington D.C., Defense Budget Project, April 14, 1993, p. 6.

VI. A COMPREHENSIVE APPROACH TO USSOCOM'S ORGANIZATION AND VERTICAL LIFT OPTIONS

Command and control, existing Army and Air Force helicopters, joint special operations missions, the combat search and rescue mission, new helicopter procurement, MV-22 procurement, MEU(SOC) vertical lift support, and aircrew training for all these machines: they're all related and a solution to one either helps solve or makes problems for the others. Including the Marine Corps and its helicopters and proposed V-22 procurement in consideration of the options not only complicates the issues but also provides more options for solutions. To expand our view and to consider yet more problems, can create more opportunities in the search for ideas on how to proceed. The Marine Corps' infrastructure of support for H-53 variant airframes expands the options just enough to have a way to fit all the puzzle pieces together. Eventually, the Marine Corps and not the Army is where the Air Force MH-53s should go.

The Army's procurement of the MH-47E and MH-60K will push the Air Force out of providing helicopters for special operations missions. USSOCOMs charted expectations of the loss of the MH-53Js by 2005 reveals as much. Although USSOCOM might expect the Air Force to continue to use the aircraft in a CSAR role, that's unlikely since the aircraft is so old, between 33 and 38 years of service and quite a few battle damage repairs in the fleet of 41 aircraft. These aircraft should be retired, but not to the boneyard--they should be given to the Marines.

The avionics, communications equipment, and electronic warfare gear installed on these aircraft can be put to good use by installing it on the newer H-53Es of the Marine Corps. The addition of Global Positioning System (GPS) navigation, forward looking infra-red, projected moving map displays, doppler navigation, ring-laser gyro inertial navigation, numerous securable radios, and a full suite of radar warning and jamming equipment will make for more than just a significant upgrade to the MEU(SOC). Such modifications will make the Marine's special operations capability more than just an add-on mission to be used only in desperation, the MEUs will have real adverse weather and penetration abilities far beyond present equipment. The H-53Es with three engines will also have weight carrying capacity well beyond the present Air Force MH-53J. The Secretary of the Air Force Acquisition Office (SAF/AQ), in consultation with Air Incorporated which supervised and contracted the AF's MH-53J modification, provided the cost figures for taking the equipment off the J-models and installing it all on the E-models of the Marine Corps—\$780,000 for each aircraft.⁵⁵ That's not a bid on the work, just a cost estimate. The Marines could have 41 Pavelow style, three engine H-53s for roughly a million per aircraft by the time of execution of this plan.

Training of Marine crews to operate the systems can actually solve problems, not make them. The Air Force will need to

⁵⁵Colonel Steven Connelly, "Memo to Col. Childress," 5 March 1992. Copy provided me by Col. Connelly, who was the test pilot on the original development of the MH-53H and MH-53J for the AF.

provide some helicopter pilots beginning in 1998 to begin flying the V-22.⁵⁶ We can replace them with Marines on assignments to AFSOC. Three or four pilots a year on exchange or loan assignment to the Air Force will train the initial cadre for assuming possession of the Air Force H-53s and all the avionics gear which takes a good deal of training to learn. By the time the first two groups of pilots finish their exchange assignments, the Marines can take the H-53s from the training school and set up their own in the new equipment--approximately in the year 2002.

The Air Force, in its agreement to the original Initiative 17 and its relative acquiescence to the draft of the Chairman's Roles and Missions Report, has made clear its willingness to shed itself of helicopters. It's unlikely there will be further procurement of rotary wing aircraft by that service. The Air Force, the most capable service of performing deep penetration missions with its jet aircraft and missiles, should supervise and provide doctrine for special operations and rescue aircraft which also have the greatest range and penetration capabilities. The MV-22 for special operations should be manned by Air Force people under USSOCOM supervision. Presently, the earliest date of IOC, or Initial Operational Capability, for the MV-22 in the Air Force is in the year 1999.⁵⁷ Even if the Joint Requirements Oversight Council (JROC) chaired by Admiral Jeremiah validates the require-

⁵⁶Lt. Col. Thomas Swertfager, Air Force Acquisition Officer, V-22, personal interview, March 25, 1993.

⁵⁷Major Robin Schmaltz, AFSOC Acquisitions Officer, V-22, personal interview, May 17, 1993.

ment for the V-22 in June of 1993, it is realistic to assume the testing, modification, and production of the MV-22 will experience some delays. Worry expressed by the Congress about an aircraft which SOCOM estimates will each cost between \$49 million and \$89 million, depending on how many are produced,⁵⁸ will likely slow procurement to spend less dollars a year. The most probable date of IOC is 2002, three years prior to the expected retirement of the Air Force H-53 from SOCOM support. In that year, we should close the AF H-53 transition school which uses 5 of the aircraft, give those aircraft to the Marines, and allow the Marines to continue the school for their pilots. Two of the aircraft can be first to provide its special equipment for the newer MH-53E. The Marine Corps can then rotate the aircraft through the modification while continuing the pilot and crew training.

Afterwards, as MV-22 Air Force crews train and achieve operational status in the Osprey, more of the MH-53J squadrons can transition out of their helicopter and turn them over to the Marines, along with the avionics equipment. This all happens after 1997, because that is the year the Army helicopter procurement program is complete and the SOCOM mission is pretty much on track for the eventual loss of the Air Force H-53s, and after the Marine Corps has completed its procurement and transition into the three engine helicopter. The aircraft transitions, with good planning and joint attention, will actually support each other

⁵⁸Pyshora.

during these years. With the new Army helicopters in place, Marine pilots receive training and displace some Air Force H-53 pilots, and the Air Force pilots begin their shift into a fixed wing aircraft which can augment both the special operations and the combat search and rescue mission.

Then, we're back to a major reason why CSAR is best placed under SOCOM. The equipment required for special operations is also the best you can find for CSAR. As General Hoar's testimony pointed out, the long range exfiltration mission and CSAR need the same aircraft. One command, with the best equipment available, should have responsibility for the two missions, apportioning air assets to support both missions, and find a way to accomplish both missions with the proper mix of fixed wing and rotary wing aircraft. The experience of DESERT STORM showed we can manage to use the same assets for both missions. Whether more V-22s will be needed to perform both missions is something we can find out in time. After using the new aircraft we can also make better judgements about buying more helicopters and what type of helicopter we'll need. Since SOCOM runs its own budget and under this proposal will be tasked to perform both related missions, it will also be the best organization to recommend procurement actions to the Congress and provide for flexibility during its implementation.

Consolidation of missions and aircraft to perform them is the course the services originally sought to follow with Initiative 17. Congress mandated such consolidation through jointness

when it created the United States Special Operations Command. Now the services are mature enough to act jointly, and the procurement actions now under way are timed to allow them to cooperate in a meaningful way to enhance significantly special operations, CSAR, and Marine capabilities. Management of this program can proceed under the direction of the USSOCOM/J5 which has officers from all services involved already in place. There will be complications in implementing such a plan, but they will be much simpler to deal with than procurement of CSAR assets by all the services and creation of a new joint command to run that small and peripheral mission. The Marines will not be able to improve their helicopter fleet beyond some bits and grabs without feeding off an Air Force program now installed on an aging fleet soon to be made obsolete by Army replacements. This plan represents a comprehensive, innovative way to affect mission capability of all services in a joint and meaningful way. Let's do it.

BIBLIOGRAPHY

- Boykin, Col. William G. "Special Operations and Low-Intensity Conflict Legislation: Why It Passed and Have the Voids Been Filled?" US Army War College, Carlisle Barracks, Pa., April 1991.
- Brytus, Lt. Colonel Joseph X. Personal Interview, served as a MEU(SOC) Composite Helicopter Squadron Commander, February 15, 1993.
- Chairman of the Joint Chiefs of Staff. "Report on the Roles, Missions, and Functions of the Armed Forces of the United States," (DRAFT ONLY), December 1992, Unpublished.
- . "Report on the Roles Missions, and Functions of the Armed Forces of the United States." February, 1993.
- Cheney, Dick. Secretary of Defense. In personal conversation with the author, July 2, 1991.
- Coleman, J.D. Pleiku: The Dawn of Helicopter Warfare in Vietnam. St. Martin's Press: New York, 1989.
- Collins, John M., "Roles and Functions of U.S. Combat Forces: Past Present, and Prospects," CRS Report for Congress, Congressional Research Service, January 21, 1993.
- Daley, Lt. Col. Dell. Commander, 1st Battalion, 160th Special Operations Aviation Regiment. Telephone interview, 21 May 1993.
- Davis, Richard C. The 31 Initiatives: A Study in Air Force-Army Cooperation. Washington: Office of Air Force History, 1987.
- Department of Defense. Defense Strategy for the 1990s: The Regional Defense Strategy. Department of Defense, Washington, D.C., January 1993.
- DMS (Defense Market Survey). DMS Market Intelligence Report: Forecast International. 1992. Obtained at Air University Library, Maxwell AFB, Al.
- General Accounting Office. "Special Operations Command: Progress in Implementing Legislative Mandates." Washington, 1990.

- . "Special Operations Forces: Army Plans Highly Concurrent Acquisition Strategy for Costly Helicopters, Report to the Honorable William V. Roth, Jr. US Senate." Washington. September, 1990.
- Guilmartin, John G. Jr., "Rescue: Yesterday, Today and Tomorrow," The MAC Flyer. vol. xxii, no. 9. September, 1975, pp.4-6.
- Hill Major John A. "AFSOF: A Unique Application of Aerospace Power." Air University Press, Maxwell AFB, Al., April 1993.
- Holloway, Admiral J.L. et.al. "Holloway Commission Report: Special Operations Review Group Rescue Mission Report." Washington, August 1990.
- Hyde, James C., "Army Still Wrestling with Software Glitches in Special Ops Helo Programs," in Armed Forces Journal International. April 1993, p. 40.
- Iannotta, Ben. "Top Special Ops Officials Bury Internal Proposal for New 'Aviation Command.'" Inside the Air Force. Vol.4, No5, February 5, 1993, p. 16.
- Kosiak, Steven. Analysis of the Fiscal Year 1994 Defense Budget Request. Defense Budget Project. Washington, April 14, 1993.
- Kyle, Colonel James H., (Ret.). The Guts to Try. Orion Books. New York, 1990.
- Locher, James R., III. Letter to Richard Davis, August 20, 1992. Copy obtained from ASO SOLIC Forces and Resources Office.
- Mullen, Rick. "Special Ops From the Sea," Defense Helicopter. vol. 12, no. 2. April-May 1993, pp.6-9.
- Powell, Gen. Colin L. Letter accompanying draft Roles and Missions Report. 18 Dec 1992. Copy provided by AF/XOE.
- Pyshora, Lt. Col. David. USSOCOM Office of Acquisitions Executive Officer and V-22 Acquisitions Officer. Telephone interview, 18 May 1993.
- Schemmer, Benjamin F. "Four New SOF Aircraft Are Late and Way Over Cost, but..." Armed Forces Journal. July, 1991, p. 42.
- . The Raid. Avon Books. New York, New York, 1986.
- . "No USAF Combat Rescue Aircraft in Gulf: It Took 72 Hours to Launch One Rescue," Armed Forces Journal. July 1991, pp. 37-38 -

Sedivy, Cmdr. Dean. "Bureaucracies at War: The V.22 Osprey Program." National Defense University. Washington, 1992.

Special Forces and Missions. Time Life Books. Alexandria, Va. 1990.

Stiner, General Carl W., "Special Ops: Unprecedented Risks, Opportunities Ahead," in Defense '92, May-June 1992, pp. 29-38.

---. Letter to the Chairman in response to draft Roles and Missions Report. 5 Jan 1993. Copy provided by AF/XOE.

---. Letter to the Honorable Robert K. Dornan, March 25, 1993.

Testimony of Gen. Carl W. Stiner to the Senate Armed Services Committee (SASC), March 5, 1992. Transcript provided by USMC Acquisitions Office.

Testimony of Gen. Joseph Hoar to the SASC, March 11, 1992. Transcript provided by USMC Acquisitions Office.

Tilford, Earl H., Jr., Search and Rescue in Southeast Asia. 1961-1975. The United States Air Force. Washington, D.C., 1980.

United States Air Force. "Essay J, Aerospace Power Capabilities," in Air Force Manual 1-1, Volume II: Basic Aerospace Doctrine of the United States Air Force. March 1992.

United States Air Force. "Essay K, Balanced Composition of Aerospace Forces," in Air Force Manual 1-1, Volume: Basic Aerospace Doctrine of the United States Air Force. March 1992.

United States Air Force. "Essay L, Aerospace Roles and Missions," in Air Force Manual 1-1, Volume II: Basic Aerospace Doctrine of the United States Air Force. March 1992.

United States Joint Chiefs of Staff. National Military Strategy of the United States. Washington, D.C., January 1992.

USSOCOM/J-5, Directorate of Plans, Chart showing projected service life of SOF aircraft. April, 1993.

Ward, CW3 Vernon. personal interview, June 1991.

Weikel, Colonel Gary L. Personal Interview, January 31, 1993.